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NOTICE OF ALLOWANCE AND FEE(S) DUE

66547

7590

11/17/2008

THE FARRELL LAW FIRM, P.C.
333 EARLE OVINGTON BOULEVARD
SUITE 701
UNIONDALE, NY 11553

EXAMINER

PEACHEES, RANDY

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 11/17/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/879,651

06/12/2001

Sung-Ho Choi

678-0692

4236

TITLE OF INVENTION: METHOD OF ASSIGNING AN UPLINK RANDOM ACCESS CHANNEL IN A CDMA MOBILE COMMUNICATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/17/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Complete and send this form, together with applicable fee(s), to: Mail

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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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66547 7590 11/17/2008
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UNIONDALE, NY 11553**

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE-FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/879,651	06/12/2001	Sung-Ho Choi	678-0692	4236
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TITLE OF INVENTION: METHOD OF ASSIGNING AN UPLINK RANDOM ACCESS CHANNEL IN A CDMA MOBILE COMMUNICATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/17/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
PEACHES, RANDY	2617	370-310000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/147; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

1

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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THE FARRELL LAW FIRM, P.C. 333 EARLE OVINGTON BOULEVARD SUITE 701 UNIONDALE, NY 11553				
EXAMINER PEACHEES, RANDY				
ART UNIT			PAPER NUMBER	
2617				
DATE MAILED: 11/17/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1188 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1188 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

09/879,651

Applicant(s)

CHOI ET AL.

Examiner

RANDY PEACHES

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERIT IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicants Argument s dated 10/10/2008.
2. ☒ The allowed claim(s) is/are 1,2,4,6 and 8-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Regarding independent **claims 1, 4, 6, 8, 13 and 20**:

The claimed invention is aimed at providing, in regards to **claim 1**, a method of being approved data transmission from a UTRAN (UMTS Terrestrial Radio Access Network) in a TDD (Time Division Duplexing) CDMA (Code Division Multiple Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- selecting one of a plurality of sync codes;
- transmitting information about the selected sync code in a time slot of a sub-frame to the UTRAN;
- receiving the sync code information, information about an arrival time of the sync code, time update information indicating a variation in a transmission time of data, and power Control information indicating an adjustment to a power gain in a UE (User Equipment) from the UTRAN on an FPACH (Fast Physical Access Channel); and
- transmitting RACH data on a P-RACH (Physical Random Access Channel) mapped from the FPACH according to the time update information and the power control information,
- the sync code information is received by monitoring as many sub-frames as a quotient of a number of the plurality of sync codes divided by a

number of FPACHs per sub-frame, for the FPACH, after transmission of the sync code.

Claim 4, a method of approving data transmission to a LIE (User Equipment) at a UTRAN (UMTS Terrestrial Radio Access Network in a TDD (Time Division Duplexing) CDMA (Code Division Multiple Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- receiving a plurality of sync codes by which the UTRAN identifies UEs that request data transmission in the time slots of sub-frames;
- detecting a reception time delay from an arrival time of each sub-frame including a sync code and a predetermined reception time slot in the sub-frame, measuring a reception power of each sync code, and transmitting information including the sync code, the arrival time of each sub-frame with a sync code, the time delay, and the power measurements on an FPACH (Fast Physical Access Channel); and
- receiving data from the LIEs on a P-RACH (Physical Random Access Channel) mapped from the FPACH according to the time information and the power control information,
- wherein the UTRAN transmits the information on FPACHs within as many sub-frames as a quotient of the number of the sync codes divided by the number of FPACHs per sub-frame after receipt of the sync codes.

Claim 6, a method of being approved data transmission from a UTRAN (UMTS Terrestrial Radio Access Network in a TDD (Time Division Duplexing) CDMA (Code Division Multiple Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- selecting one of a plurality of sync codes
- transmitting information about the selected sync code in a time slot of a sub-frame to the UTRAN;
- receiving information including the sync code in the time slot, detecting a reception time delay from an arrival time of a sub-frame including the sync code and a predetermined reception time slot in the sub-frame, measuring a transmission power of each sync code, and transmitting information including the sync code, the arrival time of each sub-frame with a sync code, the time delay, and the power measurements to the a UE (User Equipment) on an FAPCH (Fast Physical Access Channel) in the UTRAN, and
- receiving the sync code information, information about the arrival time of the sync code, time update information indicating a variation in the transmission time of data, and power information indicating an adjustment to a power gain in the LIE from the UTRAN on an FFACH (Fast Physical Access Channel), and transmitting the data on a P-RACH (Physical Random Access Channel) mapped from the FPACH to the UTRAN

according to the time update information and the power information in the UE,

- wherein the UTRAN transmits the information to the UE on the FPACH within as many sub-frames as a quotient of the number of the sync codes divided by the number of FFACHs per sub-frame after receipt of the sync code.

Claim 8, a method of being approved data transmission from a UTRAN (UMTS Terrestrial Radio Access Network) at a LIE (User Equipment) within a coverage area of the UTRAN in a TDD (Time Division Duplexing) CDMA (Code Division Multiple Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- selecting one of a plurality of sync codes by which the UTRAN identifies LIEs that request data transmission and transmitting information about the selected sync code in a time slot of a sub-frame to the UTRAN;
- receiving information indicating a sub-frame with an FPACH (Fast Physical Access Channel) that acknowledges the sent sync code on an I_FPACH (Index Fast Physical Access Channel) from the UTRAN;
- receiving time update information and power control information on the FPACH indicated by the I_FPACH; and

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- transmitting data on a P-RACH (Physical Random Access Channel) mapped from the FPACH according to the time update information and the power information.

Claim 13, a method of approving RACH (Random Access Channel) data transmission to a uE (User Equipment) within a coverage area of a UTRAN (UMTS Terrestrial Radio Access Network) at the UTRAN in a TDD (Time Division Duplexing) CDMA (Code Division Multiple Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- receiving one of a plurality of sync codes by which the UTRAN identifies LIEs that request data transmission in a time slot of a sub-frame;
- transmitting information indicating a sub-frame with an F'PACH (Fast Physical Access Channel) that acknowledges the received sync code to the UE on an I_FPACH (Index Fast Physical Access Channel);
- transmitting time update information and power control information on the FPACH indicated by the I_FPACH; and
- receiving RACH transmission data from the LIE on a P-RACH (Physical Random Access Channel) mapped from the FPACH at a time adjusted according to the time update information and with power controlled according to the power information.

Claim 20, a method of approving RACH (Random Access Channel) data transmission in a TDD (Time Division Duplexing) CDMA (Code Division Multiple

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Access) mobile telecommunication system where a frame has a plurality of sub-frames, each sub-frame has a plurality of time slots, and each time slot has a plurality of channels identified by codes, the method comprising the steps of:

- selecting one of a plurality of sync codes by which a UTRAN (UMTS Terrestrial Radio Access network) identifies UEs (User Equipments) that request data transmission and transmitting the selected sync code in a time slot of a sub-frame by a UE;
- receiving information including the sync code from the LIE, transmitting information indicating a sub-frame with an FPACH (Fast Physical Access Channel) that acknowledges the sync code to the LIE on an I FPACH (Index Fast Physical Access Channel), and transmitting an acknowledgment including time update information and power control information to the UE on the FPACH by the UTRAN; and
- receiving the I_FPACH frame and the FPACH frame from the UTRAN and transmitting RACH data on the P-RACH to the UTRAN according to the time update information and the power control information by the UE.

The closest prior art relevant to the claimed invention:

China Wireless Telecommunication Standard (CWTS), “Physical Layer Procedures”, referenced as CWTS1

CWTS1 teaches of receiving training sequences (SYNC), where the MS will randomly chose and send the SYNC's and the access request on the RACH with the Txtime and Txpower estimation. The first channel in the time slot is allocated

as BCH or PCH, whereby a maximum 8 code channels could be allocated as FPACH. The other code channels in Td0 and other main downlink time slots could be assigned as downlink traffic channels. At the UEs' side, maximum 8 code channels in T0 time slot could be allocated in the RACH. As an option, the first down link timeslot can be used as dedicated broadcast timeslot in which BCH and PCH may be mapped as described below.

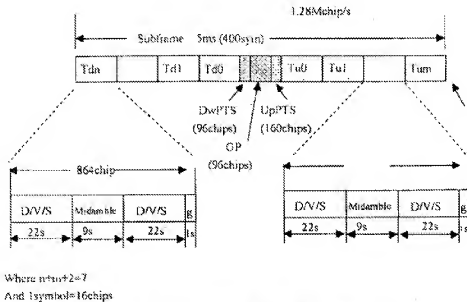


Figure 1. Time slot assignment for the TDD subframe

Although **CWTS1** is considered to constitute to the state of the claimed invention; however, in contrast with comparable differences, the instant Application is considered novel over the because the instant application teaches of selecting, by a UE, one of a plurality of sync codes SYNC1 and transmitting information about the selected sync code to a base station, and checking, by the base station, the sync code for transmitting an ACK signal and transmitting the ACK

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signal to the UE by using an FPACH to allow the UE to use an RACH. That is, sync code SYNC1 of the present invention does not have a one-to-one mapping relation to FPACH/PRACH. FPACH including RACH information is transmitted to UEs as an Ack Signal for a plurality of sync codes SYNC1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDY PEACHES whose telephone number is (571) 272-7914. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Peaches/

Examiner, Art Unit 2617

/Charles N. Appiah/

Supervisory Patent Examiner, Art Unit 2617